

What is claimed is:

1. A method for organizing laboratory procedure information in a database, comprising:

(a) defining a set of container types, wherein container types in said set of container types each have one or more positions capable of having content;

(b) defining a set of operation types;

(c) defining a set of measurement types;

(d) performing one or more operations, wherein performing any one of said operations creates a new container with a unique identifier, and wherein said new container with a unique identifier is one of said container types in said set of container types; and,

(e) performing one or more measurements, wherein performing any one of said measurements results in associating data with content in one or more of said new containers.

2. A method as in claim 1 further comprising defining a set of process types, wherein performing each process type in said set of process types creates a change of state of the content of a position in a container.

3. The method as in claim 2 further comprising performing one or more processes on one or more containers.

4. The method as in claim 2 wherein each process type has a defined protocol with a start time and a finish time.

5. The method as in claim 1 wherein each created container has an associated container map that defines an arrangement of positions in said created container and defines contents of each position in said created container.

6. The method as in claim 5 wherein a collection or set of containers share an associated container map that defines an arrangement of positions in said collection or set of containers and defines contents of each position in said collection or set of created containers.

7. The method as in claim 1 wherein each position within a container type are designated with a number.

8. The method as in claim 1 wherein one or more containers contain one or more other
5 containers.

9. The method as in claim 1 wherein each operation type has an associated protocol.

10. The method as in claim 1 wherein each measurement type has an associated protocol.

11. The method as in claim 1 wherein said performing a measurement is done with a single
10 measurement type repeatedly over time for one or more containers.

12. A program storage device readable by a machine, tangibly embodying a program of
15 instructions executable by a machine to perform method steps of claim 1 for organizing laboratory procedure information in a database.

13. A method for organizing information in a database in order to record information from
an RNA transcript profiling laboratory procedure, comprising:

20 defining a set of container types, wherein container types in said set of container types each have one or more positions capable of having content and wherein said set of container types comprises members selected from the group consisting of an Eppendorf tube, a 96 well plate, a transcript profiling array, a freezer, a data recording media screen, and a bitmap image of a data recording media screen;

25 defining a set of operation types, wherein said set of operation types comprises members selected from the group consisting of printing arrays, reading out a data recording media screen, creation of a plate for PCR, and a robot run that transfers content from one container to another;

defining a set of measurement types, wherein said set of measurement types comprises members selected from the group consisting of OD₆₀₀ of a bacterial plate, OD₂₆₀ of a DNA

solution, intercalating agent quantitation of PCR product, agarose gel quantitation of PCR product, mRNA quantitation, and readout signal for each position in an array;

defining a set of process types, wherein said set of process types comprises members selected from the group consisting of incubating, PCR cycling, denaturing arrays, prepare probe from RNA, hybridize probe with array, incubate data recording media screens, and readout data recording media screen;

performing one or more operations, wherein performing any one of said operations creates a new container with a unique identifier, and wherein said new container with a unique identifier is one of said container types in said set of container types;

performing one or more processes on one or more of said new containers, wherein performing any one of said processes changes a state in one or more of said new containers; and,

performing one or more measurements, wherein performing any one of said measurements results in associating data with content in one or more of said new containers.

14. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps of claim 13 for organizing information obtained from RNA transcript profiling in a database.